

## REVIEWS OF BOOKS.

**Carr, Herbert Wildon**, Honorary D. Litt., Durham; Honorary LL.D. Southern California; Professor of Philosophy in the University of London. *Changing Backgrounds in Religion and Ethics*. London, 1927, Macmillan & Co., Ltd. Pp. 222. Price 7s. 6d. net.

THIS book is not strictly concerned with the problem of Eugenics; it is rather an attempt to restate the problem of religion in the light of modern science and especially of the Darwinian doctrine of Evolution. The author's standpoint is not anti-religious or irreligious. "Religion," he says, "is a need of humanity; science cannot take its place" (p. 219). He deliberately rejects the mechanical theory of human nature or of Nature itself. In his view "Science has not succeeded and may never succeed in bringing the facts of life and mind into a scheme of mechanistic interpretation, indeed the signal failure of science in every one of its attempts to do so seems to invite us to reverse the principle and conceive the universe in terms of life rather than in terms of mechanism" (p. 17). There is "something in humanity which has raised it above mere animality and endowed it with spirituality" (p. 90). There are then three main facts upon which religion may rest in the future, as it has rested in the past. The first is the "principle of unity" which, even if it is unknowable, is as necessary to science as it is to religion. The second, although it is not regarded as equally convincing with the first, is the demand of morality for the existence of God and for the immortality of the soul, in accordance with Kant's doctrine of the Categorical Imperative. The third is human spirituality; for spirituality is an inherent element in all human nature. It is thus that the author arrives at the statement, "We are as conscious of God as present in us as our consciousness of our own actual being, but God's existence transcends our finite individuality and refuses to take shape under any category of thought" (p. 104). I am afraid the author takes refuge in a certain lip-service which he pays to the idea of religion; for when religion is stripped, as he would strip it, of all the doctrines which exalt it above earthly experience, there is nothing left for faith or hope or worship or veneration; and the creed of agnosticism proves wholly impotent to satisfy the highest intuitions and aspirations of the soul, nor does it justify any formal belief in the existence of the soul itself. It is probable that the author expresses his true position when at the end of the book he says, "What is the religious ideal which the evolution theory offers us? It is the ideal of a perfected humanity" (p. 222). Such an ideal may be interesting and elevating, it may warrant the Positivist Religion of Humanity; but it is not, nor can it ever be, a substitute

for the Christian creed or indeed for any creed, which teaches the Being of God.

Yet the ideal of a perfected humanity is essentially a Eugenic ideal. For such an ideal Christians no less than Agnostics may look and work, even when they do not expect that it will ever be attained. For, the more nearly humanity attains perfection, the more closely will it approach the goal which Eugenists set before themselves; and the greater will be the contribution which human beings, as they perfect themselves, will make to the understanding of the universe, and therefore to a life more strictly accordant with the moral and spiritual laws of which the universe is the visible expression. It is difficult to see that Mr. Carr, in his honest and high-minded estimate of *The Changing Backgrounds of Religion and Ethics*, has thrown any stronger light upon Eugenics than this. J. E. C. WELLDON.

**Goldschmidt, Professor D. Richard.** *Physiologische Theorie der Vererbung*. Pp. vi+247. (Berlin. Julius Springer, 1927.) 15 gold marks.

PROF. GOLDSCHMIDT'S book is an important work on the relation of genetic factors to development, a branch of genetics which has so far remained almost unexplored, and from which much may be hoped in the future. The brilliant work of the Morgan school has established the chromosome mechanism of heredity; we are familiar with genes and with the characters for which they are responsible. But here is a wide gap to be bridged, for the developmental stages by which these characters are produced have yet to be studied.

Led on from his well known work on intersexuality in *Lymantria*, Prof. Goldschmidt has attempted to apply some of his conclusions more widely. In the present book he suggests that all differences between the action of factors may be ascribed to differences in the *rates* at which they affect the various processes of development. That this idea represents a notable advance in what may be called physiological genetics can not be doubted. It is certainly too simplified, and some of the details are open to objection on several grounds, especially chemical (see, for example, Fig. 18); but here we have a definite attempt to establish a relationship between genes and characters, and its importance can hardly be over-estimated.

An example will illustrate the type of evidence obtained. Goldschmidt and his fellow workers have shown that the development of the wing pigmentation in the Lepidoptera is brought about by a curious double process. The scale rudiments develop differentially, fore-shadowing the actual pattern. The various pigments appear to be produced in the body at different times, but can only be deposited in scales which have reached a certain stage of development. Thus the pattern is a function of the relative rates of scale differentiation and pigment formation.

The work deals essentially with the Lepidoptera. The initial disadvantage of using such holometabolous species for experiments on rates of development has, to some extent, been overcome by an interesting study of the larval colouration of *Lymantria dispar*. Goldschmidt has shown that melanin production depends upon a number of